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IS 10738-2-6 (1989): Flanges for Waveguides, Part 2: Flanges for Ordinary Rectangular Waveguides, Section 6: Flange Type E [LITD 6: Wires, Cables, Waveguides and Accessories]



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“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
तरंगपथकों के लिये फ्लैज — विशिष्ट
भाग 2 साधारण आयताकार तरंगपथकों के लिये फ्लैज
अनुभाग 6 फ्लैज टाइप ई

Indian Standard

FLANGES FOR WAVEGUIDES —
SPECIFICATION

PART 2 FLANGES FOR ORDINARY RECTANGULAR WAVEGUIDES

Section 6 Flange Type E

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BUREAU OF INDIAN STANDARDS
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Price Group 3

FOREWORD

This Indian Standard (Part 2/Sec 6) was adopted by the Bureau of Indian Standards on 22 December 1989, after the draft finalized by the Microwave Components and Accessories Sectional Committee had been approved by the Electronics and Telecommunication Division Council.

This standard shall be read in conjunction with IS 10738 (Part 1) : 1983 'Flanges for waveguides: Part 1 General requirements and tests' and IS 10738 (Part 2/Sec 1) : 1990 'Flanges for waveguides: Part 2 Flanges for ordinary rectangular waveguides, Section 1 General'.

Different types of waveguide flanges are being covered in a series of Indian Standards consisting of the following individual parts of IS 10738:

- Part 1 General requirements and tests
- Part 2 Flanges for ordinary rectangular waveguides
- Part 3 Flanges for flat rectangular waveguides
- Part 4 Flanges for circular waveguides
- Part 5 Flanges for medium flat rectangular waveguides
- Part 6 Flanges for square waveguides

Part 2 of IS 10738 series comprises of in 6 sections as follows:

- Section 1 General
- Section 2 Flange Type A
- Section 3 Flange Type B
- Section 4 Flange Type C
- Section 5 Flange Type D
- Section 6 Flange Type E

While preparing this standard assistance has been derived from IEC Pub 154-2 (1980) Flanges for waveguides: Part 2 Relevant specification for flanges for ordinary rectangular waveguides, issued by the International Electrotechnical Commission.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard
**FLANGES FOR WAVEGUIDES —
SPECIFICATION**

PART 2 FLANGES FOR ORDINARY RECTANGULAR WAVEGUIDES

Section 6: Flange Type E

1 SCOPE

1.1 This standard lays down dimensional requirements for flange Type E for ordinary rectangular waveguides.

2 REFERENCES

2.1 The following standards have been referred to in this standard:

<i>IS No.</i>	<i>Title</i>
IS 4493	Hollow metallic waveguides
IS 10738 (Part 1) : 1983	Flanges for waveguides : Part 1 General requirements and tests
IS 10738 (Part 2/Sec 1) : 1990	Flanges for waveguides : Part 2 Flanges for ordinary rectangular waveguides, Section 1 General

3 CLIMATIC CATEGORY

3.1 Provisions of 3 of IS 10738 (Part 1) : 1983 shall apply.

4 MATERIALS, CONSTRUCTION AND WORKMANSHIP

4.1 Provisions of 4 of IS 10738 (Part 1) : 1983 shall apply.

5 DESIGNATION OF FLANGES FOR WAVEGUIDES

5.1 Provisions of 5 of IS 10738 (Part 1) : 1983 shall apply.

6 MARKING

6.1 Provisions of 6 of IS 10738 (Part 1) : 1983 shall apply.

7 PACKAGING

7.1 Provisions of 7 of IS 10738 (Part 1) : 1983 shall apply.

8 DIMENSIONAL REQUIREMENTS

8.1 The outline and dimensions for Type E flanges without choke or gasket groove shall be in accordance with Fig. 1, Fig. 2 and Table 1.

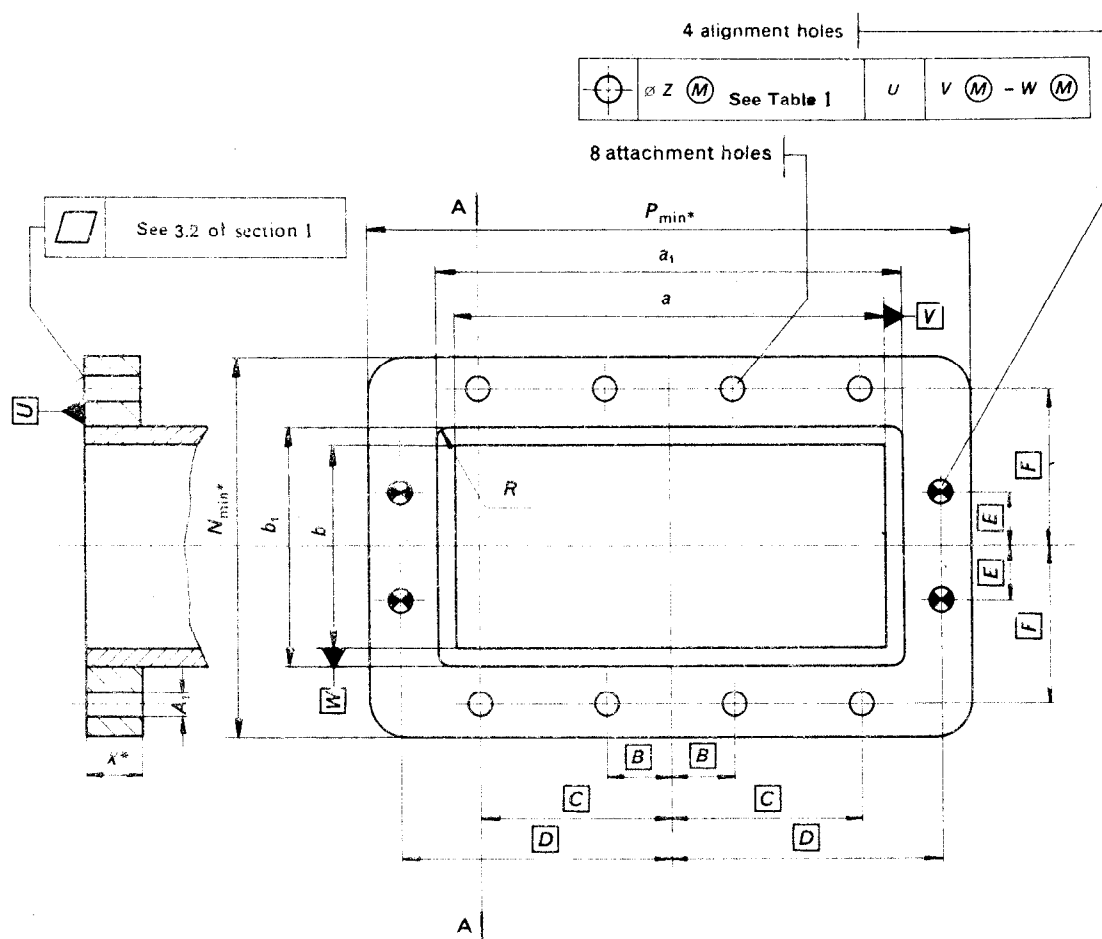
9 TESTS

9.1 Provisions of 10 of IS 10738 (Part 2/Sec 1) : 1990 shall apply.

FLANGE TYPE E

IS 10738 – UER 32

FIG. 1



Cross-section A - A

Front view

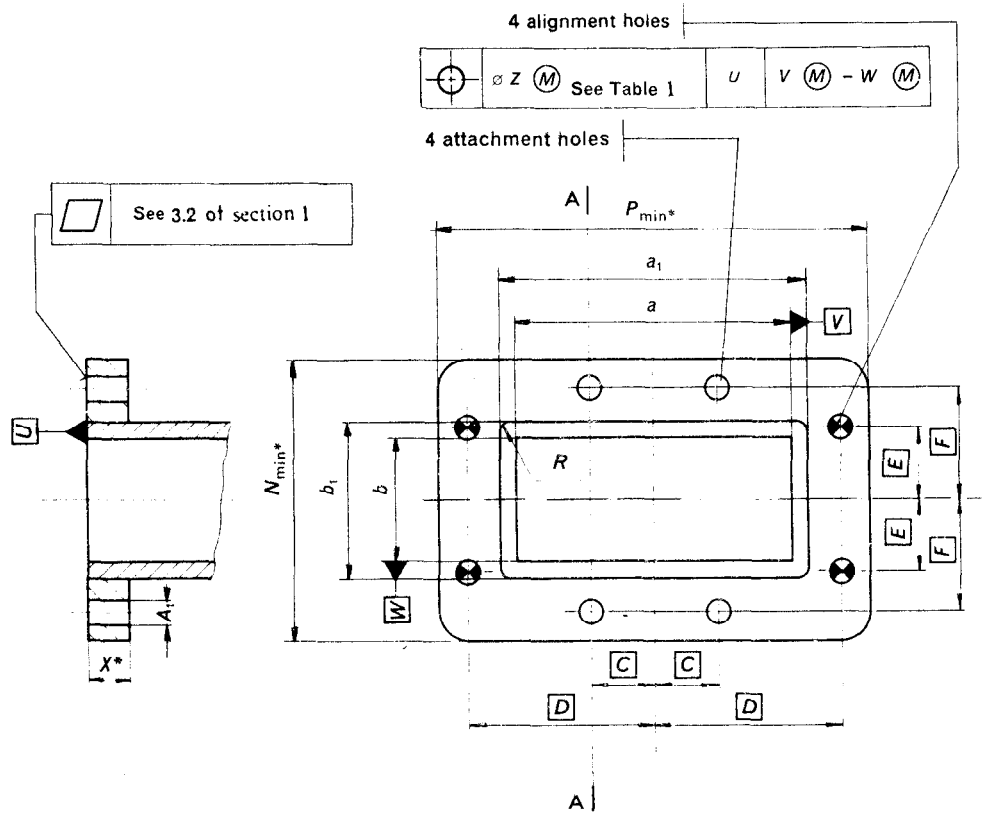
*These dimensions are not essential for the mating of two assemblies.

First Angle Projection

FLANGE TYPE E

IS 10738 – UER 40-100

FIG. 2



Cross-section A – A

Front view

*These dimensions are not essential for the mating of two assemblies.

First Angle Projection

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Table 1 Dimensions of Type E Flanges Without Choke or Gasket Grooves for Ordinary Rectangular Waveguides

Type Designation of Waveguides Flanges IS 10738	To be used with Waveguide	Figure	Dimensions for Holes							ØZ Positional tolerance	1)	1)	2)	2)	2)	R _{max}	2 B	2 C	2 D	2 E	2 F	Dimensions for alignment bolts				
			Diameter A _{1 basic}	Alignment holes		Attachment holes			Shank diameter		Fit	Deviation														
				Fit	Deviation		Fit	Deviation																		
					Lower	Upper		Lower				Upper														
Dimensions in millimetres																										
UER	3	R 3	1	For subsequent study																						
	4	R 4																								
	5	R 5																								
	6	R 6																								
	8	R 8																								
	9	R 9																								
	12	R 12																								
	14	R 14																								
	18	R 18																								
	22	R 22																								
	26	R 26																								
	32	R 32																								
	40	R 40																								
	48	R 48	2	4.000	B9	+0.140	+0.170	B15	+0.140	+0.620	0.10	61.42	32.33	80.20	50.80	6.40	0.50	—	25.40	72.24	20.62	42.88	4.000	h8	—0.018	0
	58	R 58		4.000	B9	+0.140	+0.170	B15	+0.140	+0.620	0.10	43.64	23.44	63.50	44.50	6.40	0.50	—	18.38	53.90	24.34	33.68	4.000	h8	—0.018	0
	70	R 70		4.000	B9	+0.140	+0.170	B15	+0.140	+0.620	0.10	38.10	19.05	57.94	38.90	6.40	0.50	—	16.36	49.02	17.42	29.98	4.000	h8	—0.018	0
	84	R 84		4.000	C9	+0.070	+0.100	C15	+0.070	+0.550	0.05	31.75	15.88	51.20	34.90	6.40	0.50	—	14.08	42.16	14.22	26.26	4.000	h8	—0.018	0
	100	R 100		4.000	C9	+0.070	+0.100	C15	+0.070	+0.550	0.05	25.40	12.70	44.90	32.20	6.40	0.40	—	11.94	35.82	11.42	23.12	4.000	h8	—0.018	0

1) These values are basic values of the outside cross-section of the waveguide according to IS 4493. They should be regarded as basic values for the aperture according to 8.3.11 of IS 10738 (Part 1) : 1983, that apply to unmounted flanges only. For through type flanges, the actual aperture limits depend on the assembling method and should therefore be agreed upon between both customer and manufacturer.

2) These dimensions are not essential for the mating of two assemblies.

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